Stage: Three Focus: Antarctica- Global Responsibility Duration: 10 Weeks COG: Living Land

Concept: Global Responsibility

Key Question: Why is it important that we care for and protect global environments?

Key Learning Ideas:

1. How can individuals’ actions impact upon others?
2. How do we preserve our environments for future generations?
3. How do various beliefs and practices influence interactions with the environment?

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| Week | Teaching and Learning Experiences | Resources |
| 1 | Introduction to the unit. Brainstorm- what do I know about Antarctica? What do I want to now about Antarctica? What does global responsibility mean to me? Locate Antarctica on the world map. (Google Earth) Identify neighbouring countries. Locate research bases on an Antarctic map. Identify and draw flags of countries involved in Antarctic research. | Map of the World  Map of Antarctica  Atlas with world flags  <http://www.discoveringantarctica.org.uk/9_claims.php> (part 9 making claims)  Google Earth  <http://astro.uchicago.edu/cara/vtour/ant.cia.gif> (map of research stations) |
| 2 | Discuss the term sovereignty and Australia’s claim in Antarctica. How can we ensure that the environment in Antarctica is protected? How can governments cooperate? Discuss Antarctic treaty and its importance. Complete Antarctic Treaty worksheet. Examine Australia’s research activities in Antarctica. Discuss how postage stamps have been used in Australia to commemorate historical events. Students then design a series of postage stamps to commemorate the signing of the Antarctic Treaty. Examine photos of South pole and various flags to enhance ideas. Display stamps around interesting facts as a classroom display. | <http://www.classroom.antarctica.gov.au/7-international> (section 7 international).  Google images south pole  Worksheet |
| 3 | Early Exploration. Guided reading of literature surrounding exploration. Examine exploration of Amundsen, Scott, Mawson and Shackleton. Complete the race to the pole interactive activity online as a class. Read diary entry meltdown explorers diaries. Students to write a recount as if they were one of the explorers that have been studied. Examine explorer’s travels using interactive map of Antarctica. | <http://www.discoveringantarctica.org.uk/5_race.php> (the race to the pole interactive)  <http://www.discoveringantarctica.org.uk/5_diaries.php> (meltdown explorers diaries)  <http://ngm.nationalgeographic.com/ngm/antarctica/index.html>  (Interactive map of Antarctica). |
| 4 | Food Web- Examine how ecosystems are complex and are made up of different plants and animals. Examine the food chain of the southern oceans. Use learning object The Circle Frozen Laboratory, Biology, use info to create a food web diagram in workbooks. Use food web diagram and worksheet to develop a food chain using paper chains to display in the classroom. | Worksheet, food chains.  TALE- Antarctica The Circle - The Frozen Laboratory - Biology. |
| 5,6 | Animals of Antarctica. View footage of animals in Antarctica. Revise food webs. Develop Information fact files on a range of different animals. Suggested headings for research may be name, scientific name, main body features and uses, diet, breeding habits, predators and other interesting facts. Students can use books from the library to research information and internet sources such as crittercam. Information should include an illustration. | <http://ngm.nationalgeographic.com/ngm/antarctica/index.html> (footage of animals)  <http://www.nationalgeographic.com/crittercam/antarctica/index.html>  (crittercam chronicles) |
| 7 | Plants of the Antarctic. Examine plants of the Antarctic discuss differences and growing climate. Complete worksheet and conduct experiment on growing mould. | Plants of the Antarctic and grow your own Antarctic plant worksheets.  Snaplock bags, bread, cotton wool, eye dropper and water. |
| 8 | Threats to Antarctica. Discuss Polar Issues and attached questions as a class. Focus attention to water pollution, how can water pollution affect the Antarctic environment? What would be the environmental and social impact of an oil spill in Antarctica? View images of oil spills. Explore oil spills website and link to oil spill clean-up interactive. Students to design, illustrate and label an invention that could be used to minimise and clean up the threat of an oil spill in Antarctic waters. | Polar issues worksheets.  Google images oil spills.  <http://www.classroom.antarctica.gov.au/8-environment/8-5-oil-spills-in-the-antarctic/>  (oil spills website) |
| 9 | Threats to Antarctica – Tourism. Discuss and list the advantages and disadvantages of Antarctic tourism. Examine the term eco tourism. Highlight rules and regulations for Tourists in Antarctica. Examine the future of tourism website and an environmentalist’s view upon tourism impact on Antarctica. Explore what tourists can do at different parts of Antarctica and what impact this may have on the environment using footprints interactive. Students to design a Tourist brochure for a trip to Antarctica outlining the itinery of the trip, what people will do and see, and how the tourists must act in order to care for the frozen continent. The theme for the brochure will be “Caring for Antarctica”. | Tourism worksheet  A4 paper to create brochure or use Microsoft publisher to create brochure in Lab.  <http://www.discoveringantarctica.org.uk/7_future.php>  (the future of tourism)  <http://www.discoveringantarctica.org.uk/multimedia/flash/7_footprints.html>  (footprints interactive) |
| 10 | Aurora australis- Examine the spectacular lights of the aurora australis. Discuss scientific phenomena behind the aurora using info sheet. View images on Google images. Create an artwork using sweeping design of colour. Cover piece of paper in different colours using pastels. Cover pastels using black paint or crayon. Scratch through black to reveal colours in a sweeping motion. | Paper, crayons, pastels, black paint, toothpicks or skewers.  Aurora australis worksheet. |
|  | Assessment |  |
| 4-8 | Over a five week period, students are to create a montage of images using Windows Movie Maker. The students will be asked to find and insert images surrounding the topics discussed in class. These topics are:   * Antarctica’s Geography * Sovereignty * Exploration * Animals of Antarctica * Plants of Antarctica * Threats to Antarctica.   The theme behind the movie is Global Responsibility. Students must constantly reflect upon why it is important that we care for and protect global environments? Students will compile at least five images that relate to each topic and insert captions that show their understanding and personal opinions on the matter. Transitions and music will be added to the image gallery to create further effect. The finished movies will be published and presented to the class. | Access to the Lab and Internet over a five week period.  Windows Movie Maker. |



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